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MPSRCH (TM)

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MPsrch_nn n.a. - n.a. database search, using Smith-Waterman algorithm

Run on: Tue Aug 26 07:50:42 1997; MasPar time 1767.32 Seconds
876.225 Million cell updates/sec

Tabular output not generated.

Title: >US-08-292-694A-1
Description: (1-1410) from US08292694A.seq
Perfect Score: 1410
N.A. Sequence: 1 GCGCACCITGCTGATCCCAA.....AACCCAGATIACAACTGCAG 1410
Comp: CGCGTGGAACGACTAGGGTT.....TTGGGTCTAATGTTGACGTC

Scoring table: TABLE default
Gap 6

Nmatch STD : Dbase 0; Query 0

Searched: 362067 seqs, 549138275 bases x 2

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: embl-new3
1:BCT 2:FUN 3:GEN1 4:GEN2 5:HTG1 6:HTG2 7:HUM 8:INV
9:ORG 10:MAM 11:VRT 12:PLN 13:PRO 14:ROD 15:SYN 16:UNC
17:VIR

Database: genbank99
18:BCT1 19:BCT2 20:BCT3 21:BCT4 22:BCT5 23:BCT6 24:BCT7
25:BCT8 26:BCT9 27:BCT10 28:BCT11 29:GEN1 30:GEN2
31:GEN3 32:HTG1 33:HTG2 34:HTG3 35:INV1 36:INV2 37:INV3
38:INV4 39:INV5 40:INV6 41:INV7 42:INV8 43:INV9 44:INV10
45:INV11 46:MAM1 47:MAM2 48:MAM3 49:VRT1 50:VRT2 51:VRT3
52:VRT4 53:PAT1 54:PAT2 55:PAT3 56:PAT4 57:PAT5 58:PHG
59:PLN1 60:PLN2 61:PLN3 62:PLN4 63:PLN5 64:PLN6 65:PLN7
66:PLN8 67:PLN9 68:PLN10 69:PLN11 70:PRI1 71:PRI2
72:PRI3 73:PRI4 74:PRI5 75:PRI6 76:PRI7 77:PRI8 78:PRI9
79:PRI10 80:PRI11 81:PRI12 82:PRI13 83:PRI14 84:PRI15
85:ROD1 86:ROD2 87:ROD3 88:ROD4 89:ROD5 90:ROD6 91:ROD7
92:ROD8 93:STR 94:SYN 95:UNA 96:VRL1 97:VRL2 98:VRL3
99:VRL4 100:VRL5 101:VRL6 102:VRL7 103:VRL8 104:VRL9
105:VRL10

Database: genbank-new3
106:BCT 107:GEN1 108:GEN2 109:HIG1 110:HTG2 111:INV
112:MAM 113:VRT 114:PHG 115:PLN 116:PRI1 117:PRI2
118:ROD 119:SYN 120:UNA 121:VRL

Database: u-embl50_99
122:part1

Statistics: Mean 11.459; Variance 4.438; scale 2.582

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

%

Result No.	Score	Query Match	Length	DB	ID	Description	Pred. No.
1	1410	100.0	1410	89	MUSKAPOPRE	Mouse kappa opioid re	0.00e+00
2	1208	85.7	1288	92	S81111	kappa-opioid receptor	0.00e+00
3	1133	80.4	1273	91	RATRORD	Rat mRNA for opioid r	0.00e+00
4	1133	80.4	1358	90	RATKOR1A	Rat kappa opioid rece	0.00e+00
5	1131	80.2	2094	90	RATKOR1B	Rattus norvegicus kap	0.00e+00
6	1131	80.2	4742	92	RNU00442	Rattus norvegicus kap	0.00e+00
7	1129	80.1	2481	90	RATKOR	Rattus norvegicus mRN	0.00e+00
8	901	63.9	1604	82	HUMOPRK1B	Homo sapiens (clone d	0.00e+00
9	867	61.5	1182	77	HSU11053	Human kappa opioid re	0.00e+00
10	857	60.8	1733	85	CPU04092	Cavia porcellus Hartl	0.00e+00
11	850	60.3	1154	77	HSU17298	Human kappa opioid re	0.00e+00
12	618	43.8	1186	92	S77868S3	kappa opioid receptor	0.00e+00
13	607	43.0	638	89	MUSMORGDP3	Mouse MORGD gene for	0.00e+00
14	558	39.6	4048	91	RNKOR3	Rattus norvegicus kap	0.00e+00
15	354	25.1	488	89	MUSMORGDP2	Mouse MORGD gene for	0.00e+00
16	354	25.1	1109	92	S77868S2	kappa opioid receptor	0.00e+00
17	348	24.7	432	87	MMU16998	Mus musculus kappa op	0.00e+00
18	341	24.2	658	91	RNKOR2	Rattus norvegicus kap	0.00e+00
19	337	23.9	432	81	HUMKOR	Homo sapiens kappa op	0.00e+00
20	315	22.3	1610	87	MMU26915	Mus musculus mu opioi	3.22e-295
21	313	22.2	2229	87	MMU19380	Mus musculus mu opioi	4.70e-293
22	311	22.1	2135	91	RATMUOR1A	Rattus norvegicus Mu	6.84e-291
23	311	22.1	2397	91	RATRORB	Rat mRNA for rat opio	6.84e-291
24	309	21.9	1401	91	RATMOPIOID	Rat mu opioid recepto	9.95e-289
25	309	21.9	1448	92	RNU02083	Rattus norvegicus mu-	9.95e-289
26	309	21.9	1586	91	RATMORA	Rattus norvegicus mu	9.95e-289
27	307	21.8	1367	92	RNU35424	Rattus norvegicus mu	1.44e-286
28	290	20.6	455	82	HUMOPRK1A	Homo sapiens (clone h	3.28e-268
29	291	20.6	1834	92	S65335	delta opioid receptor	2.74e-269
30	291	20.6	1835	88	MUSDOPRCP	Mouse delta-opioid re	2.74e-269
31	291	20.6	2203	92	S66181	delta opiate receptor	2.74e-269
32	291	20.6	2219	88	MUSDELTC	Mus musculus delta-op	2.74e-269
33	291	20.6	2272	88	MUSDELOPRE	Mouse delta opioid re	2.74e-269
34	289	20.5	1415	112	BTU89677	Bos taurus mu opioid	3.93e-267
35	289	20.5	1415	10	BTU89677	Bos taurus mu opioid	3.93e-267
36	289	20.5	1473	77	HSU12569	Human mu opioid recep	3.93e-267
37	289	20.5	1610	82	HUMOPIOIDA	Homo sapiens opioid r	3.93e-267
38	289	20.5	2162	82	HUMMOR1X	Human Mu opiate recep	3.93e-267
39	285	20.2	1366	92	RNU00475	Rattus norvegicus Spr	8.08e-263
40	285	20.2	1418	91	RATRORA	Rat mRNA for rat opio	8.08e-263
41	283	20.1	2302	48	PIGMUOPR	Sus scrofa (clone 1d7	1.16e-260
42	273	19.4	423	89	MUSMORGDP1	Mouse MORGD gene for	6.76e-250
43	273	19.4	2074	92	S77868S1	kappa opioid receptor	6.76e-250
44	270	19.1	1136	77	HSU10504	Human delta opiate re	1.14e-245
45	270	19.1	1773	77	HSU07882	Human delta opioid re	1.14e-246

ALIGNMENTS

RESULT 1
LOCUS MUSKAPOPRE 1410 bp mRNA ROD 13-DEC-1993
DEFINITION Mouse kappa opioid receptor mRNA, complete cds.
ACCESSION L11065
NID g348248
KEYWORDS kappa opioid receptor.
SOURCE Mus musculus (library: Clontech #ML1036a) brain cDNA to mRNA.
ORGANISM Mus musculus
Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
Murinae; Mus.
REFERENCE 1 (bases 1 to 1410)
AUTHORS Yasuda,K., Raynor,K., Kong,H., Breder,C.D., Takeda,J., Reisine,T. and Bell,G.I.
TITLE Cloning and functional comparison of kappa and delta opioid receptors from mouse brain
JOURNAL Proc. Natl. Acad. Sci. U.S.A. 90, 6736-6740 (1993)
MEDLINE 93342064
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                     CHPVKALDFRTPLKAKIINICIWLLASSVGISAIVLGGTKVREDVDVIECSLQFPDDE
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ORIGIN

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  Best Local Similarity 100.0%;  Pred. No. 0.00e+00;
  Matches  1410;  Conservative    0;  Mismatches   0;  Indels   0;  Gaps   0;

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Qy      1 GCGCACCTTGCTGATCCCAAACAGGCAGAGCTTCTTCCAGTCTTGGAAGGCACAAATTGA 60

Db     61 gcatcaggaacgtggacccatcagggctgaacagctactcaggatctaaagtggtgacttt 120
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Qy     61 GCATCAGGAACGTGGACCCATCAGGGCTGAACAGCTACTCAGGATCTAAAGTGGTGACTT 120

Db    121 ggaaagctgacggtgacttgggaagggaggtcgccaatcagcgatctggagctgcagcgc 180
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Db    181 tcaccatggagtccccccattcagatcttccgaggagatccaggccctacctgctctccca 240
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Db    241 gtgcttgccttctccccaacagcagctcttggttccccaactgggcagaatccgacagta 300
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Qy    421 TGGTCATGTTTGTCATCATCCGATACACGAAGATGAAGACCGCAACCAACATCTACATAT 480

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Db    721 acatctgcatttggctcctggcatcatctgttggtatatcagcgatagtccttggaggca 780
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Db    781 ccaaagtcagggaagatgtggatgtcattgaatgctccttgcagtttcctgatgatgaat 840
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Db    841 attcctggtgggatctcttcatgaagatctgtgtcttcgtctttgcctttgtgatcccag 900
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RESULT    2
LOCUS       S81111       1288 bp    mRNA            ROD       02-AUG-1996
DEFINITION  kappa-opioid receptor {alternatively spliced} [mice, C58/J, R1.1
            thymoma cells, mRNA Partial, 1288 nt].
ACCESSION   S81111
NID         g1478285
KEYWORDS    .
SOURCE      Mus sp. C58/J R1.1 thymoma cells.
  ORGANISM  Mus sp.
            Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
            Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
            Mus.
REFERENCE   1  (bases 1 to 1288)
  AUTHORS   Belkowski,S.M., Zhu,J., Liu-Chen,L.Y., Eisenstein,T.K., Adler,M.W.
            and Rogers,T.J.
  TITLE     Sequence of kappa-opioid receptor cDNA in the R1.1 thymoma cell
            line
  JOURNAL   J. Neuroimmunol. 62 (1), 113-117 (1995)
  MEDLINE   96084989
  REMARK    GenBank staff at the National Library of Medicine created this
            entry [NCBI gibbsq 175931] from the original journal article.
            This sequence comes from Fig. 3.
COMMENT     longer of two transcripts.
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ORIGIN

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  Matches  1206;  Conservative    0;  Mismatches   0;  Indels   0;  Gaps   0;

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Qy     170 AGCTGCAGCGCTCACCATGGAGTCCCCCATTCAGATCTTCCGAGGAGATCCAGGCCCTAC 229

Db     141 ctgctctcccagtgcttgccttctccccaacagcagctcttggttccccaactgggcaga 200
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Qy     230 CTGCTCTCCCAGTGCTTGCCTTCTCCCCAACAGCAGCTCTTGGTTCCCCAACTGGGCAGA 289

Db     201 atccgacagtaatggcagtgtgggctcagaggatcagcagctggagtccgcgcacatctc 260
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Qy     290 ATCCGACAGTAATGGCAGTGTGGGCTCAGAGGATCAGCAGCTGGAGTCCGCGCACATCTC 349

Db     261 tccggccatccctgttatcatcaccgctgtctactctgtggtatttgtggtgggcttagt 320
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Qy     350 TCCGGCCATCCCTGTTATCATCACCGCTGTCTACTCTGTGGTATTTGTGGTGGGCTTAGT 409

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Qy     410 GGGCAATTCTCTGGTCATGTTTGTCATCATCCGATACACGAAGATGAAGACCGCAACCAA 469

Db     381 catctacatatttaacctggctttggcagatgctttggttactaccactatgcccttca 440
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Db     501 ttccattgactactacaacatgtttaccagcatattcaccttgaccatgatgagtgtgga 560
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Db     741 tgatgatgaatattcctggtgggatctcttcatgaagatctgtgtcttcgtctttgcctt 800
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Db     861 tgtccggctcctgtctggctcccgagagaaggaccgaaatctccgccgcatcaccaagct 920
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Db     921 ggtgctggtagtagttgcagtcttcatcatctgttggacccccattcacatctttatcct 980
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Qy    1070 GGTGGAGGCTCTGGGAAGCACCTCCCACAGCACAGCTGCCCTCTCCAGCTATTATTTCTG 1129

Db    1041 tattgccttgggttataccaacagcagcctgaatcctgttctctatgcctttctggatga 1100
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Qy    1130 TATTGCCTTGGGTTATACCAACAGCAGCCTGAATCCTGTTCTCTATGCCTTTCTGGATGA 1189

Db    1101 aaacttcaagcggtgttttagggacttctgcttccctattaagatgcgaatggagcgcca 1160
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Qy    1190 AAACTTCAAGCGGTGTTTTAGGGACTTCTGCTTCCCTATTAAGATGCGAATGGAGCGCCA 1249

Db    1161 gagcaccaatagagttagaaacacagttcaggatcctgcttccatgagagatgtgggagg 1220
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Qy    1250 GAGCACCAATAGAGTTAGAAACACAGTTCAGGATCCTGCTTCCATGAGAGATGTGGGAGG 1309

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Db    1281 agagttca 1288
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Qy    1370 AGAGTTCA 1377


RESULT    3
LOCUS       RATRORD      1273 bp    mRNA            ROD       21-DEC-1993
DEFINITION  Rat mRNA for opioid receptor, complete cds.
ACCESSION   D16534
NID         g409390
KEYWORDS    G-protein coupled receptor; opioid receptor; transmembrane protein.
SOURCE      Rattus norvegicus (strain Wistar) adult brain cDNA to mRNA, clone
            pROR2.
  ORGANISM  Rattus norvegicus
            Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
            Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
            Murinae; Rattus.
REFERENCE   1  (bases 1 to 1273)
  AUTHORS   Nishi,M., Takeshima,H., Fukuda,K., Kato,S. and Mori,K.
  TITLE     cDNA cloning and pharmacological characterization of an opioid
            receptor with high affinities for .kappa.-subtype-selective ligands
  JOURNAL   FEBS Lett. 330, 77-80 (1993)
  MEDLINE   93380575
COMMENT     Submitted (19-JUN-1993) to DDBJ by: Hiroshi Takeshima
            International Institute
            for Advanced Studies
            c/o Shimadzu Corporation
            N-80
            1 Nishinokyo-Kuwahara-cho
            Kyoto 604
            Japan
            Phone: 075-823-1208
            Fax:   075-811-8186.
FEATURES              Location/Qualifiers
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                      CHPVKALDFRTPLKAKIINICIWLLASSVGISAIVLGGTKVREDVDVIECSLQFPDDE
                      YSWWDLFMKICVFVFAFVIPVLIIIVCYTLMILRLKSVRLLSGSREKDRNLRRIIKLV
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BASE COUNT      278 a    340 c    294 g    361 t
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  Best Local Similarity  95.6%;  Pred. No. 0.00e+00;
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Db      93 ctgtgctcccagtgcttgcctactccccaacagcagctcttggttccccaactgggccga 152
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Qy     230 CTGCTCTCCCAGTGCTTGCCTTCTCCCCAACAGCAGCTCTTGGTTCCCCAACTGGGCAGA 289

Db     153 atcggacagcaatggcagtgtgggctccgaggaccagcagctggagcccgcgcacatctc 212
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Qy     290 ATCCGACAGTAATGGCAGTGTGGGCTCAGAGGATCAGCAGCTGGAGTCCGCGCACATCTC 349

Db     213 tccagccatccctgttatcatcaccgctgtctactctgtggtgtttgtggtgggcttagt 272
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Qy     350 TCCGGCCATCCCTGTTATCATCACCGCTGTCTACTCTGTGGTATTTGTGGTGGGCTTAGT 409

Db     273 gggcaattccctggtcatgtttgtcatcatccgatacacaaagatgaagaccgcaaccaa 332
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Db     333 catctacatatttaacctggctttggcagatgctttggttactaccactatgcccttcca 392
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Qy     470 CATCTACATATTTAACCTGGCTTTGGCAGATGCTTTGGTTACTACCACTATGCCCTTTCA 529

Db     393 gagtgctgtctacttgatgaattcttggccttttggagatgttctgtgcaagattgtcat 452
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Db     453 ttccattgactactacaacatgtttaccagcatattcaccttgaccatgatgagtgtgga 512
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Db     513 ccgctacattgccgtgtgccaccctgtgaaagctttggatttccgaacacctttgaaagc 572
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Db     573 aaagatcatcaacatctgcatttggctactggcatcatctgttggtatatcagcgatagt 632
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Db     633 ccttggaggcaccaaagtcagggaagatgtggatgtcattgaatgctccttgcagtttcc 692
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Qy     770 CCTTGGAGGCACCAAAGTCAGGGAAGATGTGGATGTCATTGAATGCTCCTTGCAGTTTCC 829

Db     693 tgatgatgaatattcctggtgggacctcttcatgaagatctgtgtcttcgtctttgcctt 752
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Qy     830 TGATGATGAATATTCCTGGTGGGATCTCTTCATGAAGATCTGTGTCTTCGTCTTTGCCTT 889

Db     753 tgttatccctgtcttaatcatcattgtctgctacaccctgatgatcctgcgcttgaagag 812
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Qy     890 TGTGATCCCAGTCCTCATCATCATTGTCTGCTACACCCTGATGATCCTGCGCCTGAAGAG 949

Db     813 tgtccggctcctctcgggctctcgagagaaggaccgaaatctccgccggatcaccaagct 872
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Qy     950 TGTCCGGCTCCTGTCTGGCTCCCGAGAGAAGGACCGAAATCTCCGCCGCATCACCAAGCT 1009

Db     873 ggtgctggtagtggttgcagtcttcatcatctgttggacccccatccacatctttatcct 932
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Db     933 ggtcgaggctctaggcagcacctcccacagcacagctgtcctctctagctattacttctg 992
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Db     993 cattgccttgggttataccaacagcagcttgaatcctgttctctatgcctttcttgatga 1052
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Db    1173 gatgaataagccagtatgactagtcatggaaatgtcttcctattgttctccgggtagaga 1232
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Qy    1310 GATGAATAAGCCAGTATGACTAGTCGTGGAAATGTCTTCTTATTGTTCTCCAGGTAGAGA 1369

Db    1233 agagttcaatgatcttggtttaacccagattaccactgcag 1273
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Qy    1370 AGAGTTCAATGATCTTGGTTTAACCCAGATTACAACTGCAG 1410


RESULT    4
LOCUS       RATKOR1A     1358 bp    mRNA            ROD       21-OCT-1993
DEFINITION  Rat kappa opioid receptor mRNA, complete cds.
ACCESSION   L22001
NID         g409236
KEYWORDS    kappa opioid receptor; opioid receptor.
SOURCE      Rattus norvegicus whole brain cDNA to mRNA.
  ORGANISM  Rattus norvegicus
            Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
            Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
            Murinae; Rattus.
REFERENCE   1  (bases 1 to 1358)
  AUTHORS   Chen,Y., Mestek,A., Liu,J. and Yu,L.
  TITLE     Molecular cloning of a rat kappa opioid receptor reveals sequence
            similarities to the mu and delta opioid receptors
  JOURNAL   Biochem. J. 295, 625-628 (1993)
  MEDLINE   94059008
FEATURES             Location/Qualifiers
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  Best Local Similarity  95.6%;  Pred. No. 0.00e+00;
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Qy     230 CTGCTCTCCCAGTGCTTGCCTTCTCCCCAACAGCAGCTCTTGGTTCCCCAACTGGGCAGA 289

Db     175 atcggacagcaatggcagtgtgggctccgaggaccagcagctggagcccgcgcacatctc 234
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Db     235 tccagccatccctgttatcatcaccgctgtctactctgtggtgtttgtggtgggcttagt 294
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Qy     350 TCCGGCCATCCCTGTTATCATCACCGCTGTCTACTCTGTGGTATTTGTGGTGGGCTTAGT 409
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Qy   1190 AAACTTCAAGCGGTGTTTTAGGGACTTCTGCTTCCCTATTAAGATGCGAATGGAGCGCCA 1249
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Qy   1250 GAGCACCAATAGAGTTAGAAACACAGTTCAGGATCCTGCTTCCATGAGAGATGTGGGAGG 1309
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Qy   1310 GATGAATAAGCCAGTATGACTAGTCGTGGAAATGTCTTCTTATTGTTCTCCAGGTAGAGA 1369
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RESULT    5
LOCUS       RATKOR1B     2094 bp    mRNA            ROD       19-NOV-1993
DEFINITION  Rattus norvegicus kappa opioid receptor (KOR-1) mRNA, complete cds.
ACCESSION   L22536
NID         g425188
KEYWORDS    G-protein coupled receptor; kappa opioid receptor; transmembrane
            protein.
SOURCE      Rattus norvegicus (strain Sprague-Dawley) (library: lambda gt10)
            adult brain (striatum) cDNA to mRNA.
  ORGANISM  Rattus norvegicus
            Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
            Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
            Murinae; Rattus.
REFERENCE   1  (bases 1 to 2094)
  AUTHORS   Li,S., Zhu,J., Chen,C., Chen,Y.-W., de Riel,J.K., Ashby,B. and
            Liu-Chen,L.-Y.
  TITLE     Molecular cloning and expression of a rat k opioid receptor
  JOURNAL   Biochem. J. 295, 629-633 (1993)
  MEDLINE   94059009
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ORIGIN

  Query Match          80.2%;  Score 1131;  DB 90;  Length 2094;
  Best Local Similarity  95.6%;  Pred. No. 0.00e-00;
  Matches  1186;  Conservative    0;  Mismatches   55;  Indels    0;  Gaps    0;

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Db    327 atcggacagcaatggcagtgtgggctccgaggaccagcagctggagcccgcgcacatctc 386
Qy    290 ATCCGACAGTAATGGCAGTGTGGGCTCAGAGGATCAGCAGCTGGAGTCCGCGCACATCTC 349
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Qy   1010 GGTGCTGGTAGTAGTTGCAGTCTTCATCATCTGTTGGACCCCCATTCACATCTTTATCCT 1069

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Qy   1070 GGTGGAGGCTCTGGGAAGCACCTCCCACAGCACAGCTGCCCTCTCCAGCTATTATTTCTG 1129

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Qy   1130 TATTGCCTTGGGTTATACCAACAGCAGCCTGAATCCTGTTCTCTATGCCTTTCTGGATGA 1189

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Qy   1250 GAGCACCAATAGAGTTAGAAACACAGTTCAGGATCCTGCTTCCATGAGAGATGTGGGAGG 1309

Db   1347 gatgaataagccagtatgactagtcatggaaatgtcttcctattgttctccgggtagaga 1406

Qy   1310 GATGAATAAGCCAGTATGACTAGTCGTGGAAATGTCTTCTTATTGTTCTCCAGGTAGAGA 1369

Db   1407 agagttcaatgatcttggtttaacccagattaccactgcag 1447

Qy   1370 AGAGTTCAATGATCTTGGTTTAACCCAGATTACAACTGCAG 1410
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RESULT    6
LOCUS       RNU00442     4742 bp    mRNA            ROD       25-MAY-1994
DEFINITION  Rattus norvegicus kappa1 opioid receptor mRNA, complete cds.
ACCESSION   U00442
NID         g403486
KEYWORDS    .
SOURCE      Norway rat.
  ORGANISM  Rattus norvegicus
            Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
            Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
            Murinae; Rattus.
REFERENCE   1  (bases 1 to 4742)
  AUTHORS   Meng,F., Xie,G.-X., Thompson,R.C., Mansour,A., Goldstein,A.,
            Watson,S.J. and Akil,H.
  TITLE     Cloning and pharmacological characterization of a rat kappa opioid
            receptor
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 90, 9954-9958 (1993)
  MEDLINE   94052210
REFERENCE   2  (bases 1 to 4742)
  AUTHORS   Meng,F.
  TITLE     Direct Submission
  JOURNAL   Submitted (05-AUG-1993) Fan Meng, Mental Health Research Institute,
            University of Michigan, 205 Zina Pitcher Place, Ann Arbor, Michigan
            48109, USA
FEATURES             Location/Qualifiers
     source          1..4742
                     /organism="Rattus norvegicus"
                     /strain="Sprague Dawley"
                     /clone="rK1OR"
                     /clone_lib="rat striatum cDNA library"
                     /sex="male and female"
                     /tissue_type="brain striatum"
     CDS             257..1399
                     /codon_start=1
                     /evidence=experimental
                     /product="rat kappa1 opioid receptor"
                     /db_xref="PID:g403487"
                     /translation="MESPIQIFRGEPGPTCAPSACLLPNSSSWFPNWAESDSNGSVGS
                     EDQQLEPAHISPAIPVIITAVYSVVFVVGLVGNSLVMFVIIRYTKMKTATNIYIFNLA
                     LADALVTTTMPFQSAVYLMNSWPFGDVLCKIVISIDYYNMFTSIFTLTMMSVDRYIAV
                     CHPVKALDFRTPLKAKIINICIWLLASSVGISAIVLGGTKVREDVDVIECSLQFPDDE
                     YSWWDLFMKICVFVFAFVIPVLIIIVCYTLMILRLKSVRLLSGSREKDRNLRRITKLV
                     LVVVAVFIICWTPIHIFILVEALGSTSHSTAVLSSYYFCIALGYTNSSLNPVLYAFLD
                     ENFKRCFRDFCFPIKMRMERQSTNRVRNTVQDPASMRDVGGMNKPV"
     polyA_signal    3986..3991
     polyA_signal    4719..4724
     polyA_site      4742
BASE COUNT     1340 a    987 c    973 g    1442 t
ORIGIN
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Query Match 80.2%; Score 1131; DB 92; Length 4742;
Best Local Similarity 95.6%; Pred. No. 0.00e+00;
Matches 1186; Conservative 0; Mismatches 55; Indels 0; Gaps 0;

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Db    241 agctgcagcactcaccatggagtcccccatccagattttccgcggagagccaggccctac 300

Qy    170 AGCTGCAGCGCTCACCATGGAGTCCCCCATTCAGATCTTCCGAGGAGATCCAGGCCCTAC 229

Db    301 ctgtgctcccagtgcttgcctactccccaacagcagctcttggttccccaactgggccga 360

Qy    230 CTGCTCTCCCAGTGCTTGCCTTCTCCCCAACAGCAGCTCTTGGTTCCCCAACTGGGCAGA 289

Db    361 atcggacagcaatggcagtgtgggctccgaggaccagcagctggagcccgcgcacatctc 420

Qy    290 ATCCGACAGTAATGGCAGTGTGGGCTCAGAGGATCAGCAGCTGGAGTCCGCGCACATCTC 349

Db    421 tccagccatccctgttatcatcaccgctgtctactctgtggtgtttgtggtgggcttagt 480

Qy    350 TCCGGCCATCCCTGTTATCATCACCGCTGTCTACTCTGTGGTATTTGTGGTGGGCTTAGT 409

Db    481 gggcaattccctggtcatgtttgtcatcatccgatacacaaaagatgaagaccgcaaccaa 540

Qy    410 GGGCAATTCTCTGGTCATGTTTGTCATCATCCGATACACGAAGATGAAGACCGCAACCAA 469

Db    541 catctacatatttaacctggctttggcagatgctttggttactaccactatgccctttca 600

Qy    470 CATCTACATATTTAACCTGGCTTTGGCAGATGCTTTGGTTACTACCACTATGCCCTTTCA 529

Db    601 gagtgctgtctacttgatgaattcttggccttttggagatgttctgtgcaagattgtcat 660

Qy    530 GAGTGCTGTCTACTTGATGAATTCTTGGCCTTTTGGAGATGTGCTATGCAAGATTGTCAT 589

Db    661 ttccattgactactacaacatgtttaccagcatattcaccttgaccatgatgagtgtgga 720

Qy    590 TTCCATTGACTACTACAACATGTTTACCAGCATATTCACCTTGACCATGATGAGTGTGGA 649

Db    721 ccgttacattgccgtgtgccaccctgtgaaagctttggatttccgaacacctttgaaagc 780

Qy    650 CCGCTACATTGCTGTGTGCCACCCTGTGAAAGCTTTGGACTTCCGAACACCTTTGAAAGC 709
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Db    781 aaagatcatcaacatctgcatttggctactggcatcatctgttggtatatcagcgatagt 840
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Qy    710 AAAGATCATCAACATCTGCATTTGGCTCCTGGCATCATCTGTTGGTATATCAGCGATAGT 769

Db    841 ccttggaggcaccaaagtcagggaagatgtggatgtcattgaatgctccttgcagtttcc 900
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Qy    770 CCTTGGAGGCACCAAAGTCAGGGAAGATGTGGATGTCATTGAATGCTCCTTGCAGTTTCC 829

Db    901 tgatgatgaatattcctggtgggacctcttcatgaagatctgtgtcttcgtctttgcctt 960
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Qy    830 TGATGATGAATATTCCTGGTGGGATCTCTTCATGAAGATCTGTGTCTTCGTCTTTGCCTT 889

Db    961 tgttatccctgtcttaatcatcattgtctgctacaccctgatgatcctgcgcttgaagag 1020
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Qy    890 TGTGATCCCAGTCCTCATCATCATTGTCTGCTACACCCTGATGATCCTGCGCCTGAAGAG 949

Db   1021 tgtccggctcctctcgggctctcgagagaaggaccgaaatctccgccggatcaccaagct 1080
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Qy    950 TGTCCGGCTCCTGTCTGGCTCCCGAGAGAAGGACCGAAATCTCCGCCGCATCACCAAGCT 1009

Db   1081 ggtgctggtagtggttgcagtcttcatcatctgttggacccccatccatatctttatcct 1140
          |||||||||||| |||||||||||||||||||||||||||||| || ||||||||||||
Qy   1010 GGTGCTGGTAGTAGTTGCAGTCTTCATCATCTGTTGGACCCCCATTCACATCTTTATCCT 1069

Db   1141 ggtggaggctctaggcagcacctcccacagcacagctgtcctctctagctattacttctg 1200
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Qy   1070 GGTGGAGGCTCTGGGAAGCACCTCCCACAGCACAGCTGCCCTCTCCAGCTATTATTTCTG 1129

Db   1201 cattgccttgggttataccaacagcagcttgaatcctgttctctatgcctttcttgatga 1260
          |||||||||||||||||||||||||||||||||||||||||||||||||||||| |||||
Qy   1130 TATTGCCTTGGGTTATACCAACAGCAGCCTGAATCCTGTTCTCTATGCCTTTCTGGATGA 1189

Db   1261 aaacttcaagcggtgttttagggacttctgcttccccattaagatgcgaatggagcgccca 1320
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Qy   1190 AAACTTCAAGCGGTGTTTTAGGGACTTCTGCTTCCCTATTAAGATGCGAATGGAGCGCCA 1249

Db   1321 gagcacaaacagagttagaaacacagttcaggatcctgcttccatgagggatgtgggtgg 1380
          |||||| |. ||||||||||||||||||||||||||||||||||||||||| |||||||| ||
Qy   1250 GAGCACCAATAGAGTTAGAAACACAGTTCAGGATCCTGCTTCCATGAGAGATGTGGGAGG 1309

Db   1381 gatgaataagccagtatgactagtcatggaaatgtcttcctattgttctccgggtagaga 1440
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Qy   1310 GATGAATAAGCCAGTATGACTAGTCGTGGAAATGTCTTCTTATTGTTCTCCAGGTAGAGA 1369

Db   1441 agagttcaatgatcttggtttaacccagattaccactgcag 1481
          |||||||||||||||||||||||||||||||| |||||||
Qy   1370 AGAGTTCAATGATCTTGGTTTAACCCAGATTACAACTGCAG 1410
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RESULT    7
LOCUS       RATKOR       2481 bp    mRNA            ROD       02-DEC-1993
DEFINITION  Rattus norvegicus mRNA for kappa opioid receptor, complete cds.
ACCESSION   D16829
NID         g404115
KEYWORDS    kappa opioid receptor.
SOURCE      Rattus norvegicus cDNA to mRNA.
  ORGANISM  Rattus norvegicus
            Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
            Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
            Murinae; Rattus.
REFERENCE   1  (bases 1 to 2481)
  AUTHORS   Minami,M., Toya,T., Katao,Y., Maekawa,K., Nakamura,S., Onogi,T.,
            Kaneko,S. and Satoh,M.
  TITLE     Cloning and expression of a cDNA for the rat kappa-opioid receptor
  JOURNAL   FEBS Letters 329, 291-295 (1993)
  MEDLINE   93374033
COMMENT     Submitted (21-JUL-1993) to DDBJ by: Masabumi Minami
            Department of Pharmacology
            Faculty of pharmaceutical Sciences
            Kyoto University
            Kyoto, Kyoto 606-01
            Japan
            Phone: 075-753-4546
            Fax:   075-753-4586.
FEATURES              Location/Qualifiers
     source           1..2481
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     CDS              111..1253
                      /codon_start=1
                      /product="kappa opioid receptor"
                      /db_xref="PID:g404116"
                      /translation="MESPIQIFRGEPGPTCAPSACLLPNSSSWFPNWAESDSNGSLGS
                      EDQQLEPAHISPAIPVIITAVYSVVFVVGLVGNSLVMFVIIRYTKMKTATNIYIFNLA
                      LADALVTTTMPFQSAVYLMNSWPFGDVLCKIVISIDYYNMFTSIFTLTMMSVDRYIAV
                      CHPVKALDFRTPLKAKIINICIWLLASSVGISAIVLGGTKVREDVDVIECSLQFPDDE
                      YSWWDLFMKICVFVFAFVIPVLIIIVCYTLMILRLKSVRLLSGSREKDRNLRRITKLV
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BASE COUNT      629 a    588 c    544 g    720 t
ORIGIN
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Query Match 80.1%; Score 1129; DB 90; Length 2481;
Best Local Similarity 95.5%; Pred. No. 0.00e+00;
Matches 1185; Conservative 0; Mismatches 56; Indels 0; Gaps 0;

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Db     95 agctgcagcactcaccatggagtcccccatccagattttccgcggagagccaggccctac 154
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Qy    170 AGCTGCAGCGCTCACCATGGAGTCCCCCATTCAGATCTTCCGAGGAGATCCAGGCCCTAC 229

Db    155 ctgtgctcccagtgcttgcctactccccaacagcagctcttggttccccaactgggccga 214
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Qy    230 CTGCTCTCCCAGTGCTTGCCTTCTCCCCAACAGCAGCTCTTGGTTCCCCAACTGGGCAGA 289

Db    215 atcggacagcaatggcagtttgggctccgaggaccagcagctggagcccgcgcacatctc 274
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Qy    290 ATCCGACAGTAATGGCAGTGTGGGCTCAGAGGATCAGCAGCTGGAGTCCGCGCACATCTC 349

Db    275 tccagccatccctgttatcatcaccgctgtctactctgtggtgtttgtggtgggcttagt 334
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Qy    350 TCCGGCCATCCCTGTTATCATCACCGCTGTCTACTCTGTGGTATTTGTGGTGGGCTTAGT 409

Db    335 gggcaattccctggtcatgtttgtcatcatccgatacacaaagatgaagaccgcaaccaa 394
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Qy    410 GGGCAATTCTCTGGTCATGTTTGTCATCATCCGATACACGAAGATGAAGACCGCAACCAA 469

Db    395 catctacatatttaacctggctttggcagatgctttggttactaccactatgcccttcca 454
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Qy    470 CATCTACATATTTAACCTGGCTTTGGCAGATGCTTTGGTTACTACCACTATGCCCTTTCA 529

Db    455 gagtgctgtctacttgatgaattcttggccttttggagatgttctgtgcaagattgtcat 514
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Qy    530 GAGTGCTGTCTACTTGATGAATTCTTGGCCTTTTGGAGATGTGCTATGCAAGATTGTCAT 589

Db    515 ttccattgactactacaacatgtttaccagcatattcaccttgaccatgatgagtgtgga 574
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Qy    590 TTCCATTGACTACTACAACATGTTTACCAGCATATTCACCTTGACCATGATGAGTGTGGA 649

Db    575 ccgctacattgccgtgtgccaccctgtgaaagctttggatttccgaacacctttgaaagc 634
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Qy    650 CCGCTACATTGCTGTGTGCCACCCTGTGAAAGCTTTGGACTTCCGAACACCTTTGAAAGC 709

Db    635 aaagatcatcaacatctgcatttggctactggcatcatctgttggtatatcagcgatagt 694
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Qy    710 AAAGATCATCAACATCTGCATTTGGCTCCTGGCATCATCTGTTGGTATATCAGCGATAGT 769

Db    695 ccttggaggcaccaaagtcagggaagatgtggatgtcattgaatgctccttgcagtttcc 754
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Qy    770 CCTTGGAGGCACCAAAGTCAGGGAAGATGTGGATGTCATTGAATGCTCCTTGCAGTTTCC 829

Db    755 tgatgatgaatattcctggtgggacctcttcatgaagatctgtgtcttcgtctttgcctt 814
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Qy    830 TGATGATGAATATTCCTGGTGGGATCTCTTCATGAAGATCTGTGTCTTCGTCTTTGCCTT 889

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Qy    890 TGTGATCCCAGTCCTCATCATCATTGTCTGCTACACCCTGATGATCCTGCGCCTGAAGAG 949
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Db    875 tgtccggctcctctcgggctctcgagagaaggaccgaaatctccgccggatcaccaagct 934
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Db    935 ggtgctggtagtggttgcagtcttcatcatctgttggacccccatccacatctttatcct 994
Qy   1010 GGTGCTGGTAGTAGTTGCAGTCTTCATCATCTGTTGGACCCCCATTCACATCTTTATCCT 1069

Db    995 ggtcgaggctctaggcagcacctctcacagcacagctgtcctctctagctattacttctg 1054
Qy   1070 GGTGGAGGCTCTGGGAAGCACCTCCCACAGCACAGCTGCCCTCTCCAGCTATTATTTCTG 1129

Db   1055 cattgccttgggttataccaacagcagcttgaatcctgttctctatgcctttcttgatga 1114
Qy   1130 TATTGCCTTGGGTTATACCAACAGCAGCCTGAATCCTGTTCTCTATGCCTTTCTGGATGA 1189

Db   1115 aaacttcaagcggtgttttagggacttctgcttccccattaagatgcgaatggagcgcca 1174
Qy   1190 AAACTTCAAGCGGTGTTTTAGGGACTTCTGCTTCCCTATTAAGATGCGAATGGAGCGCCA 1249

Db   1175 gagcacaaacagagttagaaacacagttcaggatcctgcttccatgagggatgtgggtgg 1234
Qy   1250 GAGCACCAATAGAGTTAGAAACACAGTTCAGGATCCTGCTTCCATGAGAGATGTGGGAGG 1309

Db   1235 gatgaataagccagtatgactagtcatggaaatgtcttcctattgttctccgggtagaga 1294
Qy   1310 GATGAATAAGCCAGTATGACTAGTCGTGGAAATGTCTTCTTATTGTTCTCCAGGTAGAGA 1369

Db   1295 agagttcaatgatcttggtttaacccagattaccactgcag 1335
Qy   1370 AGAGTTCAATGATCTTGGTTTAACCCAGATTACAACTGCAG 1410
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RESULT    8
LOCUS       HUMOPRK1B    1504 bp    mRNA            PRI       21-MAR-1995
DEFINITION  Homo sapiens (clone d2-115) kappa opioid receptor (OPRK1) mRNA,
            complete cds.
ACCESSION   L37362
NID         g722617
KEYWORDS    OPRK1 gene; kappa opioid receptor; opioid receptor.
SOURCE      Homo sapiens (clone d2-115) (tissue library: genomic in lambda dash
            and cDNA in lambda ZAPII) fetus brain cDNA to mRNA.
  ORGANISM  Homo sapiens
            Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
            Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 1604)
  AUTHORS   Zhu,J., Chen,C., Xue,J.-C., Kunapuli,S., Deriel,J.K. and
            Liu-Chen,L.-Y.
  TITLE     Cloning of a human .kappa. opioid receptor from the brain
  JOURNAL   Life Sci. 56, 201-207 (1995)
FEATURES             Location/Qualifiers
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                     /clone="d2-115"
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                     ZAPII"
                     /map="8q11.2"
     CDS             378..1520
                     /gene="OPRK1"
                     /codon_start=1
                     /db_xref="GDB:G00-132-651"
                     /product="kappa opioid receptor"
                     /db_xref="PID:g722618"
                     /translation="MDSPIQIFRGEPGPTCAPSACLPPNSSAWFPGWAEPDSNGSAGS
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                     CHPVKALDFRTPLKAKIINICIWLLSSSVGISAIVLGGTKVREDVDVIECSLQFPDDD
                     YSWWDLFMKICVFIFAFVIPVLIIIVCYTLMILRLKSVRLLSGSREKDRNLRRITRLV
                     LVVVAVFVVCWTPIHIFILVEALGSTSHSTAALSSYYFCIALGYTNSSLNPILYAFLD
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BASE COUNT      307 a    483 c    440 g    374 t
ORIGIN

  Query Match           63.9%;  Score 901;  DB 82;  Length 1604;
  Best Local Similarity 86.7%;  Pred. No. 0.00e+00;
  Matches  1065;  Conservative    0;  Mismatches 164;  Indels    0;  Gaps    0;

Db    374 caccatggactccccgatccagatcttccgcggggagccgggccctacctgcgccccgag 433
Qy    182 CACCATGGAGTCCCCCATTCAGATCTTCCGAGGAGATCCAGGCCCTACCTGCTCTCCCAG 241

Db    434 cgcctgcctgccccccaacagcagcgcctggtttcccggctgggccgagcccgacagcaa 493
Qy    242 TGCTTGCCTTCTCCCCAACAGCAGCTCTTGGTTCCCCAACTGGGCAGAATCCGACAGTAA 301

Db    494 cggcagcgccggctcggaggacgcgcagctggagcccgcgcacatctccccggccatccc 553
Qy    302 TGGCAGTGTGGGCTCAGAGGATCAGCAGCTGGAGTCCGCGCACATCTCTCCGGCCATCCC 361

Db    554 ggtcatcatcacggcggtctactccgtagtgttcgtcgtgggcttggtgggcaactcgct 613
Qy    362 TGTTATCATCACCGCTGTCTACTCTGTGGTATTTGTGGTGGGCTTAGTGGGCAATTCTCT 421

Db    614 ggtcatgttcgtgatcatccgatacacaaagatgaagacagcaaccaacatttacatatt 673
Qy    422 GGTCATGTTTGTCATCATCCGATACACGAAGATGAAGACCGCAACCAACATCTACATATT 481

Db    674 taacctggctttggcagatgctttagttactacaaccatgccctttcagagtacggtcta 733
Qy    482 TAACCTGGCTTTGGCAGATGCTTTGGTTACTACCACTATGCCCTTTCAGAGTGCGTCTA 541

Db    734 cttgatgaattcctggccttttggggatgtgctgtgcaagatagtaatttccattgatta 793
Qy    542 CTTGATGAATTCTTGGCCTTTTGGAGATGTGCTATGCAAGATTGTCATTTCCATTGACTA 601

Db    794 ctacaacatgttcaccagcatcttcaccttgaccatgatgagcgtggaccgctacattgc 853
Qy    602 CTACAACATGTTTACCAGCATATTCACCTTGACCATGATGAGTGTGGACCGCTACATTGC 661

Db    854 cgtgtgccaccccgtgaaggctttggacttccgcacacccttgaaggcaaagatcatcaa 913
Qy    662 TGTGTGCCACCCTGTGAAAGCTTTGGACTTCCGAACACCTTTGAAAGCAAAGATCATCAA 721

Db    914 tatctgcatctggctgctgtcgtcatctgttggcatctctgcaatagtccttggaggcac 973
Qy    722 CATCTGCATTTGGCTCCTGGCATCATCTGTTGGTATATCAGCGATAGTCCTTGGAGGCAC 781

Db    974 caaagtcagggaagacgtcgatgtcattgagtgctccttgcagttcccagatgatgacta 1033
Qy    782 CAAAGTCAGGGAAGATGTGGATGTCATTGAATGCTCCTTGCAGTTTCCTGATGATGAATA 841

Db   1034 ctcctggtgggacctcttcatgaagatctgcgtcttcatctttgccttcgtgatccctgt 1093
Qy    842 TTCCTGGTGGGATCTCTTCATGAAGATCTGTGTCTTCGTCTTTGCCTTTGTGATCCCAGT 901

Db   1094 cctcatcatcatcgtctgctacaccctgatgatcctgcgtctcaagagcgtccggctcct 1153
Qy    902 CCTCATCATCATTGTCTGCTACACCCTGATGATCCTGCGCCTGAAGAGTGTCCGGCTCCT 961

Db   1154 ttctggctcccgagagaaagatcgcaacctgcgtaggatcaccagactggtcctggtggt 1213
Qy    962 GTCTGGCTCCCGAGAGAAGGACCGAAATCTCCGCCGCATCACCAAGCTGGTGCTGGTAGT 1021

Db   1214 ggtggcagtcttcgtcgtctgctggactcccattcacatattcatcctggtggaggctct 1273
Qy   1022 AGTTGCAGTCTTCATCATCTGTTGGACCCCCATTCACATCTTTATCCTGGTGGAGGCTCT 1081

Db   1274 ggggagcacctcccacagcacagctgctctctccagctattacttctgcatcgccttagg 1333
Qy   1082 GGGAAGCACCTCCCACAGCACAGCTGCCCTCTCCAGCTATTATTTCTGTATTGCCTTGGG 1141

Db   1334 ctataccaacagtagcctgaatcccattctctacgcctttcttgatgaaaacttcaagcg 1393
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Qy   1142 TTATACCAACAGCAGCCTGAATCCTGTTCTCTATGCCTTTCTGGATGAAAACTTCAAGCG 1201

Db   1394 gtgtttccgggacttctgctttccactgaagatgaggatggagcggcagagcactagcag 1453

Qy   1202 GTGTTTTAGGGACTTCTGCTTCCCTATTAAGATGCGAATGGAGCGCCAGAGCACCAATAG 1261

Db   1454 agtccgaaatacagttcaggatcctgcttacctgagggacatcgatgggatgaataaacc 1513

Qy   1262 AGTTAGAAACACAGTTCAGGATCCTGCTTCCATGAGAGATGTGGGAGGGATGAATAAGCC 1321

Db   1514 agtatgactagtcgtggagatgtcttcgtacagttcttcgggaagagaggagttcaatga 1573

Qy   1322 AGTATGACTAGTCGTGGAAATGTCTTCTTATTGTTCTCCAGGTAGAGAAGAGTTCAATGA 1381

Db   1574 tctaggtttaactcagatcactactgcag 1602

Qy   1382 TCTTGGTTTAACCCAGATTACAACTGCAG 1410
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RESULT    9
LOCUS       HSU11053     1182 bp    mRNA            PRI       24-AUG-1994
DEFINITION  Human kappa opioid receptor (hKOR) mRNA, complete cds.
ACCESSION   U11053
NID         g532059
KEYWORDS    .
SOURCE      human.
  ORGANISM  Homo sapiens
            Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
            Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 1182)
  AUTHORS   Mansson,E., Bare,L.A. and Yang,D.
  TITLE     Isolation of a human kappa opioid receptor cDNA from placenta
  JOURNAL   Biochem. Biophys. Res. Commun. 202, 1431-1437 (1994)
  MEDLINE   94338360
REFERENCE   2  (bases 1 to 1182)
  AUTHORS   Mansson,E.
  TITLE     Direct Submission
  JOURNAL   Submitted (20-JUN-1994) Erik Mansson, Molecular Biology, Ohmeda,
            PPD, 100 Mounatain Avenue, Murray Hill, NJ 07974, USA
FEATURES             Location/Qualifiers
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  Best Local Similarity  86.8%;  Pred. No. 0.00e+00;
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Qy     233 CTCTCCCAGTGCTTGCCTTCTCCCCAACAGCAGCTCTTGGTTCCCCAACTGGGCAGAATC 292

Db     121 cgacagcaacggcagccgccggctcggaggacgcgcagctggagcccgcgcacatctcccc 180

Qy     293 CGACAGTAATGGCAGTGTGGGCTCAGAGGATCAGCAGCTGGAGTCCGCGCACATCTCTCC 352

Db     181 ggccatcccggtcatcatcacggcggtctactccgtagtgttcgtcgtgggcttggtggg 240

Qy     353 GGCCATCCCTGTTATCATCACCGCTGTCTACTCTGTGGTATTTGTGGTGGGCTTAGTGGG 412

Db     241 caactcgctggtcatgttcgtgatcatccgatacacaaagatgaagacagcaaccaacat 300

Qy     413 CAATTCTCTGGTCATGTTTGTCATCATCCGATACACGAAGATGAAGACCGCAACCAACAT 472

Db     301 ttacatatttaacctggctttggcagatgctttagttactacaaccatgccctttcagag 360

Qy     473 CTACATATTTAACCTGGCTTTGGCAGATGCTTTGGTTACTACCACTATGCCCTTTCAGAG 532

Db     361 tacggtctacttgatgaattcctggccttttggggatgtgctgtgcaagatagtaatttc 420

Qy     533 TGCTGTCTACTTGATGAATTCTTGGCCTTTTGGAGATGTGCTATGCAAGATTGTCATTTC 592

Db     421 cattgattactacaacatgtttcaccagcatcttcaccttgaccatgatgagcgtggaccg 480

Qy     593 CATTGACTACTACAACATGTTTACCAGCATATTCACCTTGACCATGATGAGTGTGGACCG 652

Db     481 ctacattgccgtgtgccaccccgtgaaggctttggacttccgcacacccttgaaggcaaa 540

Qy     653 CTACATTGCTGTGTGCCACCCTGTGAAAGCTTTGGACTTCCGAACACCTTTGAAAGCAAA 712

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Qy     773 TGGAGGCACCAAAGTCAGGGAAGATGTGGATGTCATTGAATGCTCCTTGCAGTTTCCTGA 832

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Qy     833 TGATGAATATTCCTGGTGGGATCTCTTCATGAAGATCTGTGTCTTCGTCTTTGCCTTTGT 892

Db     721 gatccctgtcctcatcatcatcgtctgctacaccctgatgatcctgcgtctcaagagcgt 780

Qy     893 GATCCCAGTCCTCATCATCATTGTCTGCTACACCCTGATGATCCTGCGCCTGAAGAGTGT 952

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RESULT    10
LOCUS       CPU04092     1733 bp    mRNA            ROD       24-MAY-1995
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DEFINITION  Cavia porcellus Hartley kappa opioid receptor mRNA, complete cds.
ACCESSION   U04092
NID         g476106
KEYWORDS    .
SOURCE      guinea pig.
  ORGANISM  Cavia porcellus
            Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
            Vertebrata; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
REFERENCE   1  (bases 1 to 1733)
  AUTHORS   Xie,G.X., Meng,F., Mansour,A., Thompson,R.C., Hoversten,M.T.,
            Goldstein,A., Watson,S.J. and Akil,H.
  TITLE     Primary structure and functional expression of a guinea pig kappa
            opioid (dynorphin) receptor
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 91 (9), 3779-3783 (1994)
  MEDLINE   94224825
REFERENCE   2  (bases 1 to 1733)
  AUTHORS   Xie,G.
  TITLE     Direct Submission
  JOURNAL   Submitted (07-DEC-1993) Guo-xi Xie, Mental Health Research
            Institute, The University of Michigan, 205 Zina Pitcher Place, Ann
            Arbor, MI 48109-0720, USA
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                     /product="kappa opioid receptor"
                     /db_xref="PID:g476107"
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Query Match 60.8%; Score 857; DB 85; Length 1733;
Best Local Similarity 86.7%; Pred. No. 0.00e+00;
Matches 1013; Conservative 0; Mismatches 156; Indels 0; Gaps 0;

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Qy    242 TGCTTGCCTTCTCCCCAACAGCAGCTCTTGGTTCCCCAACTGGGCAGAATCCGACAGTAA 301

Db    356 cggcagcgcgggcccgcaggacgagcagctggagcccgcgcacatctccccggccatccc 415
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Qy    302 TGGCAGTGTGGGCTCAGAGGATCAGCAGCTGGAGTCCGCGCACATCTCTCCGGCCATCCC 361

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Qy    362 TGTTATCATCACCGCTGTCTACTCTGTGGTATTTGTGGTGGGCTTAGTGGGCAATTCTCT 421

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Qy    422 GGTCATGTTTGTCATCATCCGATACACGAAGATGAAGACCGCAACCAACATCTACATATT 481

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Qy    662 TGTGTGCCACCCTGTGAAAGCTTTGGACTTCCGAACACCTTTGAAAGCAAAGATCATCAA 721

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Qy    722 CATCTGCATTTGGCTCCTGGCATCATCTGTTGGTATATCAGCGATAGTCCTTGGAGGCAC 781

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Qy    782 CAAAGTCAGGGAAGATGTGGATGTCATTGAATGCTCCTTGCAGTTTCCTGATGATGAATA 841

Db    896 ctcctggtgggacctcttcatgaagatctgcgtctttgtctttgcctttgtgatccccgt 955
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Qy    842 TTCCTGGTGGGATCTCTTCATGAAGATCTGTGTCTTCGTCTTTGCCTTTGTGATCCCAGT 901

Db    956 cctcatcattattgtctgctatactctgatgatcctgcgtctgaagagtgtcaggctcct 1015
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Qy    902 CCTCATCATCATTGTCTGCTACACCCTGATGATCCTGCGCCTGAAGAGTGTCCGGCTCCT 961

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Qy    1082 GGGAAGCACCTCCCACAGCACAGCTGCCCTCTCCAGCTATTATTTCTGTATTGCCTTGGG 1141

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DEFINITION  Human kappa opioid receptor (hKOR) mRNA, complete cds.
ACCESSION   U17298
NID         g596069
KEYWORDS    .
SOURCE      human.
  ORGANISM  Homo sapiens
            Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
            Vertebrata; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 1154)
  AUTHORS   Simonin,F., Gaveriaux-Ruff,C., Befort,K., Matthes,H., Lannes,B.,
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            Micheletti,G., Mattei,M.G., Charron,G., Bloch,B. and Kieffer,B.
  TITLE     kappa-Opioid receptor in humans: cDNA and genomic cloning,
            chromosomal assignment, functional expression, pharmacology, and
            expression pattern in the central nervous system
  JOURNAL   Proc. Natl. Acad. Sci. U.S.A. 92 (15), 7006-7010 (1995)
  MEDLINE   95350200
REFERENCE   2  (bases 1 to 1154)
  AUTHORS   Mansson,E., Bare,L. and Yang,D.
  TITLE     Isolation of a human kappa opioid receptor cDNA from placenta
  JOURNAL   Biochem. Biophys. Res. Commun. 202 (3), 1431-1437 (1994)
  MEDLINE   94338360
REFERENCE   3  (bases 1 to 1154)
  AUTHORS   Kieffer,B.
  TITLE     Direct Submission
  JOURNAL   Submitted (18-NOV-1994) Brigitte Kieffer, Ecole Superieure De
            Biotechnologie De Strasbourg, Boulevard Sebastien Brandt, Illkirch,
            67400, France
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BASE COUNT      239 a    339 c    287 g    289 t
ORIGIN

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  Best Local Similarity 86.8%;  Pred. No. 0.00e+00;
  Matches  1002;  Conservative    0;  Mismatches 152;  Indels    0;  Gaps    0;

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Db     61 tgcctgcccccccaacagcagcgcctggtttcccggctgggccgagcccgacagcaacggc 120
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Qy    246 TGCCTTCTCCCCCAACAGCAGCTCTTGGTTCCCCAACTGGGCAGAATCCGACAGTAATGGC 305

Db    121 agcgccggctcggaggacgcgcagctggagcccgcgcacatctccccggccatcccggtc 180
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Qy    306 AGTGTGGGCTCAGAGGATCAGCAGCTGGAGTCCGCGCACATCTCTCCGGCCATCCCTGTT 365

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Qy    366 ATCATCACCGCTGTCTACTCTGTGGTATTTGTGGTGGGCTTAGTGGGCAATTCTCTGGTC 425

Db    241 atgttcgtgatcatccgatacacaaagatgaagacagcaaccaacatttacatatttaac 300
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Qy    486 CTGGCTTTGGCAGATGCTTTGGTTACTACCACTATGCCCTTTCAGAGTGCTGTCTACTTG 545

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Qy    546 ATGAATTCTTGGCCTTTTGGAGATGTGCTATGCAAGATTGTCATTTCCATTGACTACTAC 605

Db    421 aacatgttcaccagcatcttcaccttgaccatgatgagcgtggaccgctacattgccgtg 480
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Qy    606 AACATGTTTACCAGCATATTCACCTTGACCATGATGAGTGTGGACCGCTACATTGCTGTG 665

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Qy    666 TGCCACCCTGTGAAAGCTTTGGACTTCCGAACACCTTTGAAAGCAAAGATCATCAACATC 725

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Qy    726 TGCATTTGGCTCCTGGCATCATCTGTTGGTATATCAGCGATAGTCCTTGGAGGCACCAAA 785

Db    601 gtcagggaagacgtcgatgtcattgagtgctccttgcagttcccagatgatgactactcc 660
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Qy    786 GTCAGGGAAGATGTGGATGTCATTGAATGCTCCTTGCAGTTTCCTGATGATGAATATTCC 845

Db    661 tggtgggacctcttcatgaagatctgcgtcttcatctttgccttcgtgatccctgtcctc 720
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Qy    846 TGGTGGGATCTCTTCATGAAGATCTGTGTCTTCGTCTTTGCCTTTGTGATCCCAGTCCTC 905

Db    721 atcatcatcgtctgctacaccctgatgatcctgcgtctcaagagcgtccggctccttctct 780
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Qy    906 ATCATCATTGTCTGCTACACCCTGATGATCCTGCGCCTGAAGAGTGTCCGGCTCCTGTCT 965

Db    781 ggctcccgagagaaagatcgcaacctgcgtaggatcaccagactggtcctggtggtggtg 840
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Db    841 gcagtcttcgtcgtctgctggactcccattcacatattcatcctggtggaggctctgggg 900
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Qy   1026 GCAGTCTTCATCATCTGTTGGACCCCCATTCACATCTTTATCCTGGTGGAGGCTCTGGGA 1085

Db    901 agcacctcccacagcacagctgctctctccagctattacttctgcatcgccttaggctat 960
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Qy   1086 AGCACCTCCCACAGCACAGCTGCCCTCTCCAGCTATTATTTCTGTATTGCCTTGGGTTAT 1145

Db    961 accaacagtagcctgaatcccattctctacgcctttcttgatgaaaacttcaagcggtgt 1020
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Qy   1146 ACCAACAGCAGCCTGAATCCTGTTCTCTATGCCTTTCTGGATGAAAACTTCAAGCGGTGT 1205

Db   1021 ttccgggacttctgctttccactgaagatgaggatggagcggcagagcactagcagagtc 1080
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Qy   1206 TTTAGGGACTTCTGCTTCCCTATTAAGATGCGAATGGAGCGCCAGAGCACCAATAGAGTT 1265

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Qy   1266 AGAAACACAGTTCAGGATCCTGCTTCCATGAGAGATGTGGGAGGGATGAATAAGCCAGTA 1325

Db   1141 tgactagtcgtgga 1154
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Qy   1326 TGACTAGTCGTGGA 1339


RESULT   12
LOCUS       S77868S3     1186 bp    DNA                ROD       26-SEP-1995
DEFINITION  kappa opioid receptor [mice, Genomic, 1186 nt, segment 3 of 3].
ACCESSION   S77872
NID         g998531
KEYWORDS    .
SEGMENT     3 of 3
SOURCE      Mus sp.
  ORGANISM  Mus sp.
            Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
            Vertebrata; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
            Mus.
REFERENCE   1  (bases 1 to 1186)
  AUTHORS   Liu,H.C., Lu,S., Augustin,L.B., Felsheim,R.F., Chen,H.C., Loh,H.H.
            and Wei,L.N.
  TITLE     Cloning and promoter mapping of mouse kappa opioid receptor gene
  JOURNAL   Biochem. Biophys. Res. Commun. 209 (2), 639-647 (1995)
  MEDLINE   95251663
  REMARK    GenBank staff at the National Library of Medicine created this
            entry [NCBI gibbsq 166539] from the original journal article.
            This sequence comes from Fig. 2.
FEATURES             Location/Qualifiers
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                     CHPVKALDFRTPLKAKIINICIWLLASSVGISAIVLGGTKVREDVDVIECSLQFPDDE
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BASE COUNT      310 a    272 c    254 g    350 t
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  Best Local Similarity  99.8%;  Pred. No. 0.00e+00;
  Matches   619;  Conservative    0;  Mismatches   1;  Indels   0;  Gaps   0;

Db    284 ggcagatgtggatgtcattgaatgctccttgcagtttcctgatgatgaatattcctggtg 343
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Qy    791 GGAAGATGTGGATGTCATTGAATGCTCCTTGCAGTTTCCTGATGATGAATATTCCTGGTG 850

Db    344 ggatctcttcatgaagatctgtgtcttcgtctttgcctttgtgatcccagtcctcatcat 403
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Qy    851 GGATCTCTTCATGAAGATCTGTGTCTTCGTCTTTGCCTTTGTGATCCCAGTCCTCATCAT 910

Db    404 cattgtctgctacaccctgatgatcctgcgcctgaagagtgtccggctcctgtctggctc 463
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Qy    911 CATTGTCTGCTACACCCTGATGATCCTGCGCCTGAAGAGTGTCCGGCTCCTGTCTGGCTC 970

Db    464 ccgagagaaggaccgaaatctccgccgcatcaccaagctggtgctggtagtagttgcagt 523
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Qy    971 CCGAGAGAAGGACCGAAATCTCCGCCGCATCACCAAGCTGGTGCTGGTAGTAGTTGCAGT 1030

Db    524 cttcatcatctgttggacccccattcacatctttatcctggtggaggctctgggaagcac 583
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Qy   1031 CTTCATCATCTGTTGGACCCCCATTCACATCTTTATCCTGGTGGAGGCTCTGGGAAGCAC 1090

Db    584 ctcccacagcacagctgccctctccagctattatttctgtattgccttgggttataccaa 643
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Qy   1091 CTCCCACAGCACAGCTGCCCTCTCCAGCTATTATTTCTGTATTGCCTTGGGTTATACCAA 1150

Db    644 cagcagcctgaatcctgttctctatgcctttctggatgaaaacttcaagcggtgttttag 703
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Qy   1151 CAGCAGCCTGAATCCTGTTCTCTATGCCTTTCTGGATGAAAACTTCAAGCGGTGTTTTAG 1210

Db    704 ggacttctgcttcccctattaagatgcgaatggagcgccagagcaccaatagagttagaaa 763
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Qy   1211 GGACTTCTGCTTCCCTATTAAGATGCGAATGGAGCGCCAGAGCACCAATAGAGTTAGAAA 1270

Db    764 cacagttcaggatcctgcttccatgagagatgtgggagggatgaataagccagtatgact 823
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Qy   1271 CACAGTTCAGGATCCTGCTTCCATGAGAGATGTGGGAGGGATGAATAAGCCAGTATGACT 1330

Db    824 agtcgtggaaatgtcttcttattgttctccaggtagagaagagttcaatgatcttggttt 883
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Qy   1331 AGTCGTGGAAATGTCTTCTTATTGTTCTCCAGGTAGAGAAGAGTTCAATGATCTTGGTTT 1390

Db    884 aacccagattacaactgcag 903
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Qy   1391 AACCCAGATTACAACTGCAG 1410

RESULT   13
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LOCUS       MUSMORGDP3    638 bp    DNA              ROD       18-MAY-1995
DEFINITION  Mouse MORGD gene for kappa-opioid receptor, exon 3.
ACCESSION   D31665
NID         g643595
KEYWORDS    G-protein associated; kappa opioid receptor; opioid drugs and
            peptides-binding; transmembrane protein.
SEGMENT     3 of 3
SOURCE      Mus musculus (library: phage lambda fixII) DNA.
  ORGANISM  Mus musculus
            Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
            Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
            Murinae; Mus.
REFERENCE   1  (bases 1 to 638)
  AUTHORS   Nishi,M., Takeshima,H., Mori,M., Nakagawara,K. and Takeuchi,T.
  TITLE     Structure and chromosomal mapping of genes for the mouse
            kappa-opioid receptor and an opioid receptor homologue (MOR-C)
  JOURNAL   Biochem. Biophys. Res. Commun. 205 (2), 1353-1357 (1994)
  MEDLINE   95100967
COMMENT     Submitted (28-May-1994) to DDBJ by:
            Hiroshi Takeshima
            Department of Neurochemistry
            Tokyo Institute of Psychiatry
            2-1-8 Kamikitazawa, Setagaya-ku
            Tokyo 156
            Japan
            Phone: 03-3304-5701 x312
            Fax:   03-3329-8035.
FEATURES              Location/Qualifiers
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                      /db_xref="PID:g808876"
                      /translation="MESPIQIFRGDPGPTCSPSACLLPNSSSWFPNWAESDSNGSVGS
                      EDQQLESAHISPAIPVIITAVYSVVFVVGLVGNSLVMFVIIRYTKMKTATNIYIFNLA
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                      CHPVKALDFRTPLKAKIINICIWLLASSVGISAIVLGGTKVREDVDVIECLLQFPDDE
                      YSWWDLFMKICVVVFAFVIPVLIIIVCYTLMILRLKSVRLLSGSREKDRNLRRITKLV
                      LVVVAVFIICWTPIHIFILVEALGSTSHSTAALSSYYFCIALGYTNSSLNPVLYAFLD
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  Matches   613;  Conservative    0;  Mismatches   6;  Indels   0;  Gaps   0;

Db     20 cacggcagatgtggatgtcattgaatgcttgttgcagtttcctgatgatgaatattcctg 79
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Qy    788 CAGGGAAGATGTGGATGTCATTGAATGCTCCTTGCAGTTTCCTGATGATGAATATTCCTG 847

Db     80 gtgggatctcttcatgaagatctgtgtcgtcgtctttgcctttgtgatcccagtcctcat 139
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Qy    848 GTGGGATCTCTTCATGAAGATCTGTGTCTTCGTCTTTGCCTTTGTGATCCCAGTCCTCAT 907

Db    140 catcattgtctgctacaccctgatgatcctgcgcctgaagagtgtccggctgctgtctgg 199
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Qy    908 CATCATTGTCTGCTACACCCTGATGATCCTGCGCCTGAAGAGTGTCCGGCTCCTGTCTGG 967

Db    200 ctcccgagagaaggaccgaaatctccgccgcatcaccaagctggtgctggtagtagttgc 259
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Qy    968 CTCCCGAGAGAAGGACCGAAATCTCCGCCGCATCACCAAGCTGGTGCTGGTAGTAGTTGC 1027

Db    260 agtcttcatcatctgttggacccccattcacatctttatcctggtggaggctctgggaag 319
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Qy   1028 AGTCTTCATCATCTGTTGGACCCCCATTCACATCTTTATCCTGGTGGAGGCTCTGGGAAG 1087

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Qy   1088 CACCTCCCACAGCACAGCTGCCCTCTCCAGCTATTATTTCTGTATTGCCTTGGGTTATAC 1147

Db    380 caacagcagcctgaatcctgttctctatgcctttctggatgaaaacttcaagcggtgttt 439

Qy   1148 CAACAGCAGCCTGAATCCTGTTCTCTATGCCTTTCTGGATGAAAACTTCAAGCGGTGTTT 1207

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Qy   1208 TAGGGACTTCTGCTTCCCTATTAAGATGCGAATGGAGCGCCAGAGCACCAATAGAGTTAG 1267

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Qy   1268 AAACACAGTTCAGGATCCTGCTTCCATGAGAGATGTGGGAGGGATGAATAAGCCAGTATG 1327

Db    560 actagtcgtggaaatgtcttcttattgttctccaggtagagaagagttcaatgatcttgg 619

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Db    620 tttaacccagattacaact 638

Qy   1388 TTTAACCCAGATTACAACT 1406
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RESULT   14
LOCUS        RNKOR3       4048 bp    DNA                 ROD       25-MAR-1995
DEFINITION   Rattus norvegicus kappa opioid receptor gene, exon 4 and complete
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ACCESSION    U17995
NID          g727258
KEYWORDS     .
SEGMENT      3 of 3
SOURCE       Norway rat.
  ORGANISM   Rattus norvegicus
             Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
             Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
             Murinae; Rattus.
REFERENCE    1  (bases 1 to 4048)
  AUTHORS    Yakovlev,A.G., Krueger,K.E. and Faden,A.I.
  TITLE      Structure and expression of a rat kappa opioid receptor gene
  JOURNAL    J. Biol. Chem. 270 (12), 6421-6424 (1995)
  MEDLINE    95204422
REFERENCE    2  (bases 1 to 4048)
  AUTHORS    Yakovlev,A.G.
  TITLE      Direct Submission
  JOURNAL    Submitted (02-DEC-1994) Alexander G. Yakovlev, Georgetown
             University School of Medicine, Neurology, 3900 Reservoir Rd.,
             Washington, DC 20007, USA
FEATURES             Location/Qualifiers
     source          1..4048
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                     2, 3, and 4"
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                     /product="kappa opiate receptor"
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Best Local Similarity 95.0%; Pred. No. 0.00e+00;
Matches 589; Conservative 0; Mismatches 31; Indels 0; Gaps 0;

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Db     84 ggcagatgtggatgtcattgaatgctccttgcagtttcctgatgatgaatattcctggtg 143

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Db    144 ggacctcttcatgaagatctgtgtcttcgtctttgcctttgttatccctgtcttaatcat 203

Qy    851 GGATCTCTTCATGAAGATCTGTGTCTTCGTCTTTGCCTTTGTGATCCCAGTCCTCATCAT 910

Db    204 cattgtctgctacaccctgatgatcctgcgcttgaagagtgtccggctcctctcgggctc 263

Qy    911 CATTGTCTGCTACACCCTGATGATCCTGCGCCTGAAGAGTGTCCGGCTCCTGTCTGGCTC 970

Db    264 tcgagagaaggaccgaaatctccgccggatcaccaagctggtgctggtagtggttgcagt 323

Qy    971 CCGAGAGAAGGACCGAAATCTCCGCCGCATCACCAAGCTGGTGCTGGTAGTAGTTGCAGT 1030

Db    324 cttcatcatctgttggacccccatccacatctttatcctggtcgaggctctaggcagcac 383

Qy   1031 CTTCATCATCTGTTGGACCCCCATTCACATCTTTATCCTGGTGGAGGCTCTGGGAAGCAC 1090

Db    384 ctcccacagcacagctgtcctctctagctattacttctgcattgccttgggttataccaa 443

Qy   1091 CTCCCACAGCACAGCTGCCCTCTCCAGCTATTATTTCTGTATTGCCTTGGGTTATACCAA 1150

Db    444 cagcagcttgaatcctgttctctatgcctttcttgatgaaaacttcaagcggtgttttag 503

Qy   1151 CAGCAGCCTGAATCCTGTTCTCTATGCCTTTCTGGATGAAAACTTCAAGCGGTGTTTTAG 1210

Db    504 ggacttctgcttccccattaagatgcgaatggagcgccagagcacaaacagagttagaaa 563

Qy   1211 GGACTTCTGCTTCCCTATTAAGATGCGAATGGAGCGCCAGAGCACCAATAGAGTTAGAAA 1270

Db    564 cacagttcaggatcctgcttccatgagggatgtgggtgggatgaataagccagtatgact 623

Qy   1271 CACAGTTCAGGATCCTGCTTCCATGAGAGATGTGGGAGGGATGAATAAGCCAGTATGACT 1330

Db    624 agtcatggaaatgtcttcttattgttctccgggtagagaagaagttcaatgatcttggttt 683

Qy   1331 AGTCGTGGAAATGTCTTCTTATTGTTCTCCAGGTAGAGAAGAGTTCAATGATCTTGGTTT 1390

Db    684 aacccagattaccactgcag 703

Qy   1391 AACCCAGATTACAACTGCAG 1410
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RESULT   15
LOCUS        MUSMORGDP2    488 bp    DNA                 ROD       18-MAY-1995
DEFINITION   Mouse MORGD gene for kappa-opioid receptor, exon 2.
ACCESSION    D31664
NID          g643594
KEYWORDS     G-protein associated; kappa opioid receptor; opioid drugs and
             peptides-binding; transmembrane protein.
SEGMENT      2 of 3
SOURCE       Mus musculus (library: phage lambda fixII) DNA.
  ORGANISM   Mus musculus
             Eukaryotae; mitochondrial eukaryotes; Metazoa; Chordata;
             Vertebrata; Eutheria; Rodentia; Sciurognathi; Myomorpha; Muridae;
             Murinae; Mus.
REFERENCE    1  (bases 1 to 488)
  AUTHORS    Nishi,M., Takeshima,H., Mori,M., Nakagawara,K. and Takeuchi,T.
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  TITLE     Structure and chromosomal mapping of genes for the mouse
            kappa-opioid receptor and an opioid receptor homologue (MOR-C)
  JOURNAL   Biochem. Biophys. Res. Commun. 205 (2), 1353-1357 (1994)
  MEDLINE   95100967
COMMENT     Submitted (28-May-1994) to DDBJ by:
            Hiroshi Takeshima
            Department of Neurochemistry
            Tokyo Institute of Psychiatry
            2-1-8 Kamikitazawa, Setagaya-ku
            Tokyo 156
            Japan
            Phone: 03-3304-5701 x312
            Fax:   03-3329-8035.
FEATURES             Location/Qualifiers
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                     /clone_lib="phage lambda fixII"
     exon            89..441
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                     /number=2
BASE COUNT      129 a    103 c     97 g    159 t
ORIGIN      Chromosome 1 A2-3.

  Query Match           25.1%;  Score 354;  DB 89;  Length 488;
  Best Local Similarity 100.0%;  Pred. No. 0.00e+00;
  Matches   354;  Conservative    0;  Mismatches   0;  Indels   0;  Gaps   0;

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Db     148 ctttggttactaccactatgccctttcagagtgctgtctacttgatgaattcttggcctt 207
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Qy     502 CTTTGGTTACTACCACTATGCCCTTTCAGAGTGCTGTCTACTTGATGAATTCTTGGCCTT 561

Db     208 ttggagatgtgctatgcaagattgtcatttccattgactactacaacatgtttaccagca 267
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Qy     562 TTGGAGATGTGCTATGCAAGATTGTCATTTCCATTGACTACTACAACATGTTTACCAGCA 621

Db     268 tattcaccttgaccatgatgagtgtggaccgctacattgctgtgtgccaccctgtgaaag 327
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Qy     622 TATTCACCTTGACCATGATGAGTGTGGACCGCTACATTGCTGTGTGCCACCCTGTGAAAG 681

Db     328 ctttggacttccgaacacctttgaaagcaaagatcatcaacatctgcatttggctcctgg 387
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Qy     682 CTTTGGACTTCCGAACACCTTTGAAAGCAAAGATCATCAACATCTGCATTTGGCTCCTGG 741

Db     388 catcatctgttggtatatcagcgatagtccttggaggcaccaaagtcagggaag 441
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